USER MANUAL

61301604052 Rev. A

SERIES 1900 & 1950 FEEDER BOTTLE FILLERS

USER MANUAL

MLP®

SERIES 1900 & 1950 FEEDER BOTTLE FILLERS

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GETINGE Castle

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Related Publications:

Service Data Manual 61301604052

Customer Manual—keyed to the customer's specific serial number

DESCRIPTION OF SYMBOLS & NOTES IN MANUAL

The following symbols with related notes appear in this manual.

"Warning" notes alert the user to the possibility of personal injury.

"Caution" notes alert the user to the possibility of damage to the equipment.

"Notes" alert the user to pertinent facts and conditions.

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SPECIAL SAFETY INSTRUCTIONS

READ THE FOLLOWING SAFETY INSTRUCTIONS CAREFULLY BEFORE OPERATING THE UNIT.

"Warning" notes alert the user to the possibility of personal injury.

Warnings Summary **P. vi**

FALL HAZARD: Areas located immediately around the filler may become a fall hazard due to water dripping from the plumbing components. For a safe environment, insure floor is kept clean and dry.

SHOCK HAZARD: Prior to any service or maintenance on the bottle filler, all utilities should be disconnected and the lockout/tagout procedures should be followed to insure safety and prevent accidental shock.

PERSONAL HAZARD AND EQUIPMENT DAMAGE: Safe and efficient operation of this equipment requires scheduled preventative maintenance. Routine adjustments and replacement of parts by other than authorized service technicians may cause personal injury or the equipment to perform less than its capabilities.

WARNINGS SUMMARY

SPECIAL SAFETY INSTRUCTIONS FOLLOW.

READ THEM CAREFULLY BEFORE OPERATING THE UNIT, AND FOLLOW THE INSTRUCTIONS.

- **FALL HAZARD:** *Areas located immediately around the filler may become a fall hazard due to water dripping from the plumbing components. For a safe environment, insure floor is kept clean and dry.*

- **SHOCK HAZARD***: Prior to any service or maintenance on the bottle filler, all utilities should be disconnected and the lockout/tagout procedures should be followed to insure safety and prevent accidental shock.*

PERSONAL HAZARD AND EQUIPMENT DAMAGE*: Safe and efficient operation of this equipment requires scheduled preventative maintenance. Routine adjustments and replacement of parts by other than authorized service technicians may cause personal injury or the equipment to perform less than its capabilities*

"Warning" notes alert the user to the possibility of personal injury. 1–v
FALL HAZARD: Areas located immediately around the filler may become a fall hazard due to water dripping from the plumbing components. For a safe environment, insure floor is kept clean and dry. 1–vi
SHOCK HAZARD: Prior to any service or maintenance on the bottle filler, all utilities should be disconnected and the lockout/tagout procedures should be followed to insure safety and prevent accidental shock. 1–vi

Section 1 General Description

INTRODUCTION

The 1900 series FEEDER BOTTLE FILLERs are designed for use in research animal care laboratories and facilities to fill feeder bottles that are mounted in stainless steel baskets.

The filling header is adaptable to various types of bottles.

Figure 1–1. 1911 FEEDER BOTTLE FILLER

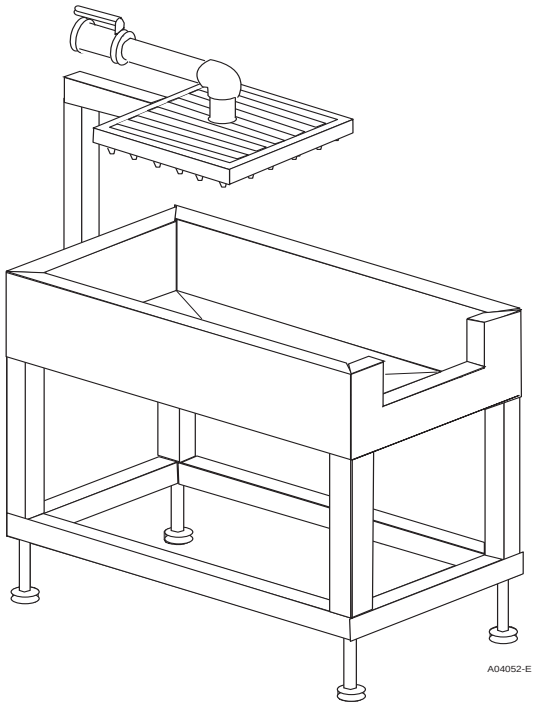


Figure 1–2. 1914 FEEDER BOTTLE FILLER
(shown with automatic operation option)

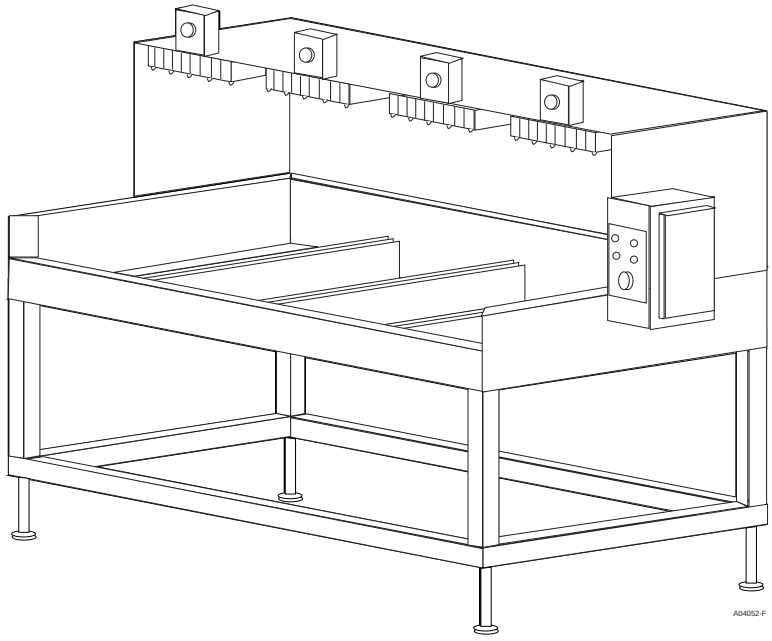
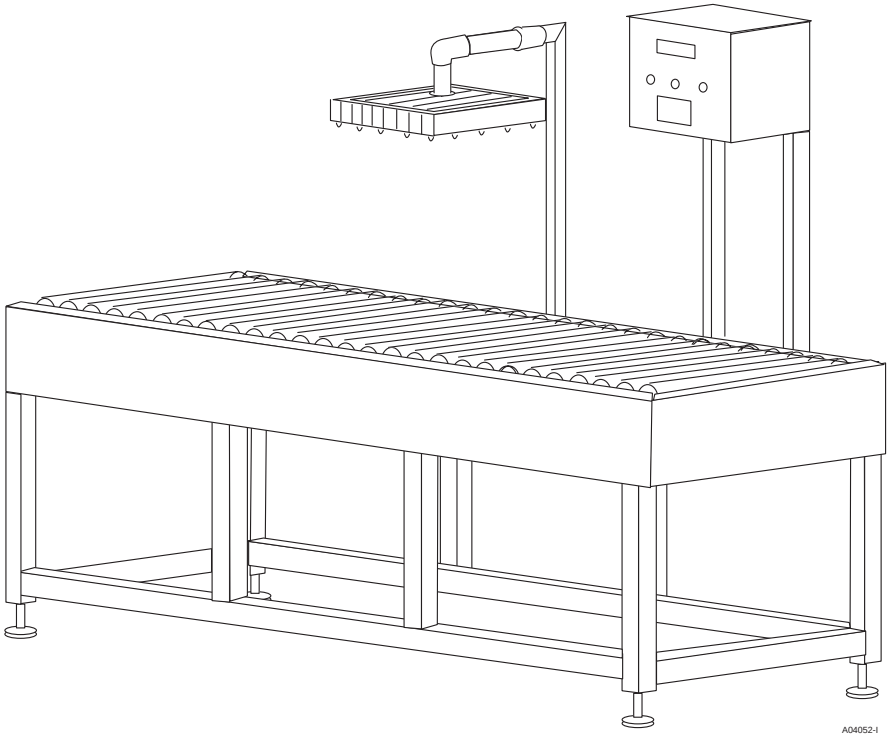


Figure 1–3. 1950 FEEDER BOTTLE FILLER
(shown with automatic operation option)



See Table 1–1 for the 1900 SERIES FEEDER BOTTLE FILLERS models and dimensions.

Table 1–1. 1900 SERIES FEEDER BOTTLE FILLERS

SIZE (W in. X. H in. X. L in. [cm])				
MODEL	BASKET SIZE (in. [cm])		NUMBER OF BASKETS	OVERALL MACHINE SIZE (in. [cm])
	5 x 5	4 x 6		
	17 x 12 x 17 [43.2 x 30.5 x 43.2]	12.5 x 13.5 x 18.5 [31.7 x 34.3 x 47]		
1911			1	20 x 48 x 36 [50.8 x 121.9 x 91.4]
1914			4	82 x 48 x 36 [208.28 x 121.9 x 91.4]
1950			7	30 x 60 x 90

Construction

The system consists of the fill header and sanitary filling system when stainless steel components are specified.

Standard Features

- All Stainless Steel Construction—The filler body is manufactured completely from stainless steel including conveyor frame and basket supporting rails.
- Manual Operating Valve—A quick operating valve is supplied for controlling the water supply to the stainless steel header.
- Stainless Steel Roller Conveyor (1950 series)—A stainless steel roller conveyor, with basket stops, is provided to easily move and position the bottle baskets under the filler head.

Optional Standards and Codes

Bottle fillers can meet the applicable requirements of:

- UL standards — Main Control Panel is fully inspected and labeled in accordance with UL standards.
- Seismic requirements per California Administrative Code.

Optional Features

For additional information about the following optional features, see “Options” on page 6–1.

- Automatic Operation
- Bottle Filling Proportioner System
- Interchangable Header
- Water Pressure Reducing Station

Section 2 Operating Instructions

GENERAL MACHINE OPERATION

The general operation of the 1900 series Bottle Filling System is completely manual.

To fill the bottles:

1. Place the basket filled with empty bottles on the basket rails.
2. Move the basket under the filling head.
3. Open the fill ball valve until the bottles are full. All bottles in the basket are filled simultaneously.
4. When the bottles are full, close the fill valve.
5. Remove the basket from the unit.

1950 Manual Operation

The general operation of the 1950 series Bottle Filling System varies slightly from the other 1900 systems. The 1950 series Bottle Filling System utilizes a roller conveyor transport the basket; the filling process is manual.

To fill the bottles:

1. Place the basket filled with empty bottles on the conveyer.
2. Move the basket under the filling head to the basket stops.
3. Open the fill ball valve until the bottles are full. All bottles in the basket are filled simultaneously.
4. When the bottles are full, close the fill valve.
5. Remove the basket from the unit.

DAILY CHECKLIST

At the beginning of the day, the user should check the following to prepare the filler for daily operation:

1. Check that the water line is supplying water to the bottle filler.
2. Apply power to the bottle filler from the Main Circuit (Automatic Fill Option).

END OF DAILY OPERATION

At the end of the day, do:

1. Remove power from the bottle filler, using the Main Circuit Breaker box.
2. Turn off the water supply using the shutoff valve.

EMERGENCY OPERATION

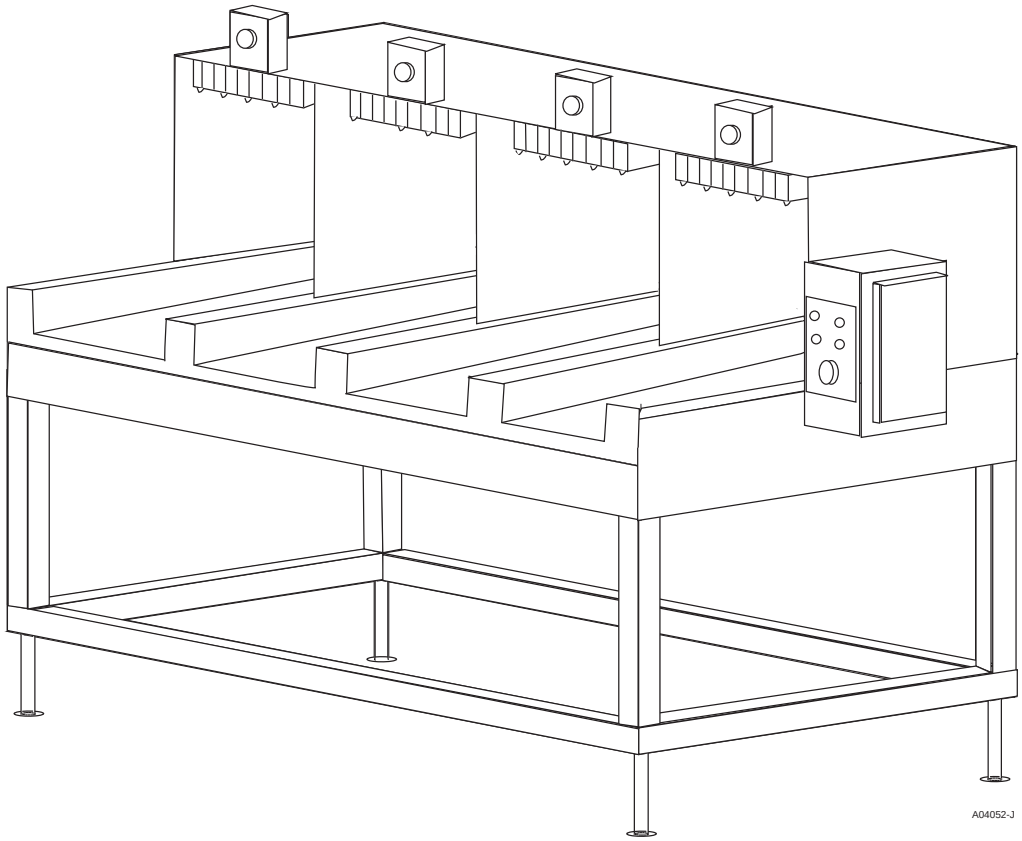
Shutting Down the Filler

In an emergency, it may be necessary to remove electrical power from the filler or to turn off the water supply. All operators should know the location of the main circuit breaker to disconnect the main electrical power and the water supply shutoff valve at the filler site.

AUTOMATIC OPERATION (OPTION)

The operation of the 1900 series Bottle Filling System with a control system makes bottle filling more automated.

FIGURE 2–1. 1914 FEEDER BOTTLE FILLER w/CONTROL SYSTEM



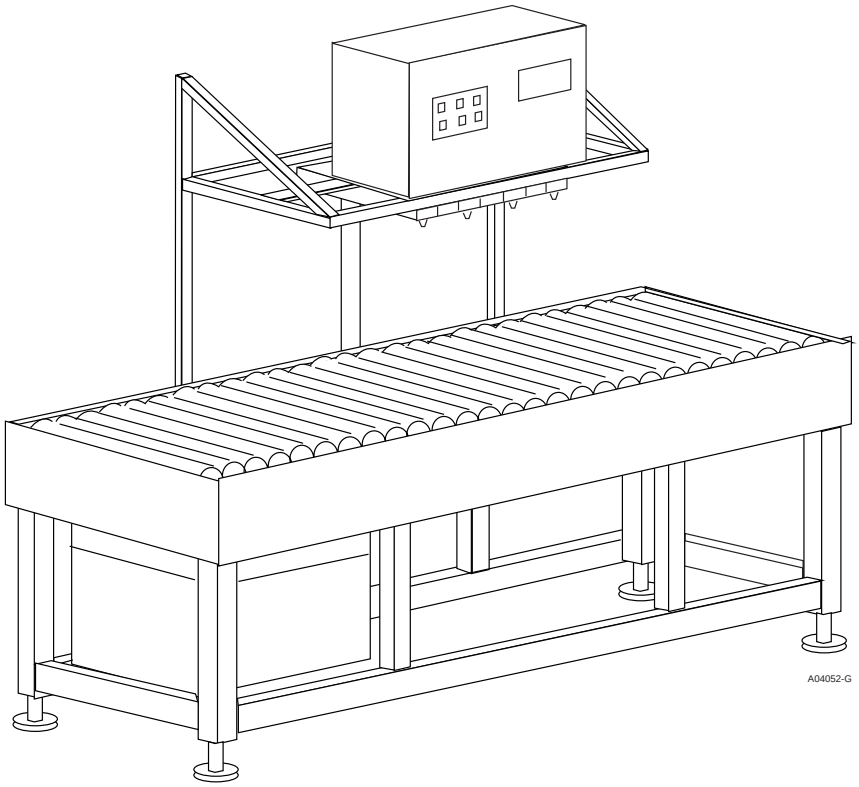
To fill the bottles:

1. Place the basket filled with empty bottles on the basket rails.
2. Move the basket under the filling head.
3. Press START over the basket to be filled.
   The control system automatically fills the bottles to the proper level and turns off the water flow.
4. When the bottles are full, remove the basket from the unit.

BOTTLE FILLING PROPORTIONER SYSTEM (OPTION)

The information contained in this subsection includes the Operating Instructions for the Edstrom Industries, Inc. BOTTLE FILLING PROPORTIONER. The option is described in “Bottle Filling Proportioner System” on page 6-2 of this manual. For additional information, refer to the *Bottle Filling Proportioner* Operation Manual.

Figure 2–2. 1950 FEEDER BOTTLE FILLER w/PROPORTIONER



Operating Instructions

READY MODE

When the controller display reads “READY”:

1. Position the bottle basket in the fill area.
2. Press FILL/PURGE. Water begins to flow and fill the bottles.
3. When the water stops flowing, the controller displays “READY” for the next fill cycle.

STAND-BY MODE

If the Bottle Filling Proportioner is idle for more than 5 minutes or if the user changes the selection from plain to treated water, or vice versa, the controller will go into STANDBY mode.

STAND-BY MODE TO READY MODE

To go from STAND-BY mode to READY mode, the unit must be purged. To initiate a purge cycle, press the FILL/PURGE button without a bottle basket in place. A preset amount of water will flow to ensure consistent, fresh water treatment.

To exit the STANDBY mode and enter the READY mode, do the following:

1. Remove any bottle baskets from the fill area.
2. Press FILL/PURGE. The prompt “PURGE?” displays.
3. Press FILL/PURGE again. Water will flow for a preset length of time.
4. The prompt “READY” displays.
   The unit is ready to fill a basket of bottles.

Section 3 Maintenance

GENERAL MAINTENANCE SCHEDULE

PERFORMANCE ASSURANCE PLAN

Preventive maintenance performed by factory-trained service representatives, using authorized parts and service techniques, is recommended. Recognizing symptoms of potential trouble and making corrections immediately is less costly and time consuming than repairing damaged equipment. Our Performance Assurance Plan offers scientific maintenance, not merely repair service.

For quality service on this equipment and information on our Performance Assurance Plan, contact Getinge/Castle, Inc. 1777 East Henrietta Road, Rochester, NY 14623-3133 or call 1-800-950-9912.

The customer is responsible for the following maintenance items at the intervals specified. Optional items may require additional maintenance. See your Customer Manual for this information.

Table 3–1. Maintenance Schedule—Standard

MAINTENANCE ITEM	INTERVAL	SEE PAGE
• HOSES	DAILY	3-2
• CLEAN SPRAY JETS AND HEADERS	AS NEEDED	3-2

ROUTINE MAINTENANCE SCHEDULE—STANDARD

Daily

HOSES

1. Check for loose clamps.
2. Check for condition of hose.

As Needed

CLEAN SPRAY JETS AND HEADERS

1. Inspect jets for debris.
2. Push the debris through the jet and into the header with a small wire.
3. If necessary, remove the spray jets from the spray header.
4. Replace the spray jets.

RECOMMENDED SPARE PARTS LIST

Consumable Stock

DESCRIPTION	PART NO.
Lustre Stainless Steel Cleaner/Polish (18 oz.)	61301600026

Recommended Spare Parts

Recommended spare parts for the 1914 Bottle Fillers are listed in Table 3–2. Manufacturers and other part numbers may be found in the replacement parts list for each model.

NOTE

See the Customer Manual for a list of replacement parts for the 1911 Bottle Filler.

See the Electrical and piping schematics in the Customer Manual for each model.

Table 3–2. 1914 BOTTLE FILLER

PART NO.	DESCRIPTION
P0011133	VALVE, WATER SOLENOID
P0020003	BULB, Sun Ray #155 PSB
P0020011	FUSE
P0020241	TOGGLE SWITCH, McGill #90-0001
P0020298	SELECTOR SWITCH

Section 4 Troubleshooting

PROBLEM	PROBABLE CAUSE	CORRECTION
No power to the Control Panel.	1. The power supply to the bottle filler is disconnected. 2. The fuse (1 AMP) is defective (Models 1911, and 1914). 3. The GFI is open.	1. Reset the power supply circuit breaker. 2. Replace the fuse. 3. Reset the GFI.
Bottle Filler does not start when the START Switch is pressed.	1. The start switch is defective. 2. The fill timer is defective (option).	1. Notify service. 2. Notify service.
Insufficient water fill.	1. Timer is set too low. 2. Shut-off valve is not fully open. 3. Solenoid water valve is defective. 4. The water line is leaking. 5. The water supply pressure has failure.	1. Reset the timer. 2. Adjust the shut-off valve. 3. Rebuild/Repair the solenoid water valve. 4. Repair the water line leak. 5. Repair the water supply problem.
Uneven water fill.	1. One or more jets are clogged. 2. Low water pressure.	1. Clean the jet(s). 2. Adjust the fill time.
No water.	1. Fill timer is set at “0”. 2. The water supply is shut off. 3. The solenoid valve is defective.	1. Reset the timer. 2. Open the water supply shut-off valve. 3. Repair/Replace the solenoid valve.
Excessive water fill.	1. The timer is set too high. 2. Incoming water pressure too high. 3. The solenoid valve is defective.	1. Reset the timer. 2. Lower the water pressure. 3. Repair/Replace the solenoid valve.
Water does not shut off completely.	The solenoid valve is defective.	Repair/Replace the solenoid valve.
Reservoir tank not draining properly.	The drain is clogged.	Clear the drain.
Bottle Filler under fills bottles.	1. The jets are dirty. 2. Low water pressure.	1. Clean the jet(s). 2. Adjust the fill time.

Section 5 Installation Instructions

INSTALLATION OPTIONS

- Freight to job site.
- Unload, uncrate, and installation by Getinge/Castle Installation Specialists.
- Supervision of installation by Getinge/Castle Installation Specialists.
- Connection to utilities.

UNCRATING & EQUIPMENT INSPECTION

Before signing the Bill of Lading and accepting the equipment, inspect the outside of the crates for any visible damage. If any damage has occurred, note it on the Bill of Lading.

After accepting the equipment, if any visible damage is apparent notify the carrier's insurance and process a claim. At this point it is good practice to take pictures of the crate to back up the claim if internal damage has occurred.

Move the crate(s) to the general area where the machine will be set in place. Uncrate the outside of the machine and inspect the contents of the equipment. If damage is apparent, take pictures of the areas.

Upon completion of the inspection process, place the machine in the spot where the equipment will be connected to the facility's services. Using the room layout print, place the base of the equipment as noted on the print. Make sure that the location of the equipment has at least a 30" clearance around the machine control panel for general maintenance.

Installation should be performed by qualified Service Technicians only.

INSTALLATION/ASSEMBLY CHECKLIST

Once your machine has been inspected for damage and properly uncrated, you are now ready to install the equipment. Installation should be performed by qualified Service Technicians only. The following should be performed before notifying your installation contractor to insure the smooth installation of your equipment.

Equipment Location

- ❑ Crates are in the room.
- ❑ Clear access is available for installation personnel.
- ❑ Lighting and AC electrical power is present within 25 feet of the installation area.
- ❑ Heating and air conditioning is available in the installation area.
- ❑ The floor has been coated/painted under the unit, if applicable.
- ❑ Check that the frame weldment is secured to a supportive wall.

Utilities

Check to insure that the following utility requirements are as follows:

- ❑ Any special application water is supplied at specific pressure as on the equipment drawings.
- ❑ Water line is supplied with a shutoff valve as specified on the euipment drawings.
- ❑ Water drains are connected as specified on the equipment drawings.

Electrical

- ❑ Insure the equipment is provided with a fused disconnect switch located within 10-15 feet from the Control Panel.
- ❑ Verify the electrical supply voltage is as specified on the equipment drawings and as noted on the nameplate of the filler.

START-UP

To ensure proper machine start-up, follow these steps:

1. Ensure that all utilities are properly connected to their respective filler connections and tightened.
2. Check that the water line is supplying water to the bottle filler.
3. Apply power to the bottle filler from the Main Circuit Breaker box. (Control System option)
4. Operate the bottle filler by following the instructions in “GENERAL MACHINE OPERATION” on page 2-1.

CHECK-OUT

Qualified Service Technicians will have the Installation Checkout Sheet for the 1900 Series Feeder Bottle Fillers. The Service Technician will verify the unit is operating correctly before leaving the installation site.

TECHNICAL DATA

SERVICE REQUIREMENTS

Utilities and services are furnished by others in accordance with the official drawings for your unit. The utilities are to be supplied with manual shut off valves, electrical services are to be supplied with fused disconnect switches, and all exhaust ducts are to be supplied with manual dampers. For utility requirements, refer to the certified specification document.

Section 6 Options

INTRODUCTION

The 1900 Series Feeder Bottle Fillers offers numerous options to meet each customer's specific needs. This chapter lists the most commonly selected options. Your bottle filler may not have all of the options listed, and could have other specific options. For the options selected with your bottle filler, please see your Customer Manual.

MOST COMMON OPTIONS

Control Panel

The filler is equipped with a control panel that governs the amount of water dispensed into each bottle.

Interchangeable Header

An additional header is supplied to accommodate different size bottles or basket patterns. The header is equipped with a quick change system that does not require tools.

Automatic Operation

The filler is equipped for automatic operation with a timer, a solenoid valve, and a stainless steel enclosure complete with a control panel to regulate the filling time and rate. On the multiple filling head unit, Model 1914, each station has a separate start button to activate the filling head.

Water Pressure Reducing Station

Provided in the inlet of the house tap water line is a pressure reducing station that stabilizes the incoming water pressure, delivering an even filling rate to the machine.

Bottle Filling Proportioner System

A complete system is provided to accurately mix a base treatment solution into the drinking water for the purpose of chlorination, acidification, or medication of the drinking water. The system consists of a water reservoir, a treatment solution reservoir, a mixing chamber, water and treatment solution pumps and valves, and an automatic control system.

NOTE

The stainless steel components option must be selected if acidified drinking water is to be used.

Water Pressure Gauges

Provided on the water lines are pressure gauges to monitor the facility utilities.

Freight to Job Site

Getinge Castle will be responsible for the freight charges required to deliver the equipment to the customers facility. Otherwise the freight will be prepaid and added to the purchase price of the equipment.

Stainless Steel Type 304 Components

The filling head, jets, and piping are provided in type 304 stainless steel construction. For use with acidified drinking water.

Stainless Steel Type 316L Components

The filler head, jets, and piping are provided in type 316L stainless steel construction. For use with acidified drinking water.

pH Monitor System

A pH analyzer with an LED readout, a front panel keyboard, and a pH probe are provided for acidification applications. The monitoring include: two (2) adjustable alarm setpoints, two (2) alarm contacts, an analog output, and temperature measurement with automatic temperature compensation.

Selectable Filling Water Types

The control system can be provided with the ability to fill with different types of water. One load, if selected, can be filled with fresh house water and the other with treated or processed water. The operator selects the type of water prior to positioning the cart in the filling position.

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